## CONSULTANT QUALITY ASSURANCE/QUALITY CONTROL

The purpose of the QA/QC procedure is to improve the quality of the structural designs and plans. ITD Bridge Design expects consultants to fully check their own work. In general, review of designs and checking of plans, calculations, specifications, and estimates should be similar to that performed by the Bridge Section for their own work. Refer to ITD Bridge LRFD Manual Article 0.4.

Quality Assurance consists of the steps needed to verify quality. This should be a defined set of procedures, with measurable and verifiable actions.

Quality Control consists of the act of reviewing and checking the design, the calculations, and the plans. Quality control should be thorough, appropriate to the project, and documented.

Review consists of verifying general conformance of the design with project objectives. This includes general features of design, constructability, and presentation of the design.

Checking consists of detailed verification of design and details. This includes checking of the design calculations, the plans, the quantities, and the specifications.

### Quality Control
Preliminary Design:
- Review major features of the project; structure type, constructability, environmental mitigation, cost.

- Check of the girder capacity, clearances, geometry.

Final Design:
- Review structure type and major features to verify that changes in the overall project have not invalidated previous project decisions; presentation and thoroughness of the plans.
- Check of design calculations, details of the design, and plans.

Design Check
A complete check of the structural design calculations shall be carried out by a Professional Engineer other than the Professional Engineer responsible for the design. This design check shall be carried out by another Consultant when the design Consultant does not have adequate in-house capabilities to provide this check.

The design check notes shall be stamped and submitted with the original design calculations.

**Revisions:**
July 2009          Added new article.